DFW

AF/2135

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

NCR Docket No. 9169

Application of:

FRAZIER, D. et al.

Group Art Unit: 2135

Serial No. 09/703,157

Examiner: GYORFI, THOMAS A.

Filed: October 31, 2000

For: GATHERING DATA FROM A DATABASE FOR DISPLAY

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF TRANSMITTAL LETTER

Sir:

Transmitted herewith for filing is an Appeal Brief to the Final Rejection dated January 31, 2005.

☒ Please charge Deposit Account No. 14 0225 for the Appeal Brief fee or any other fees associated with the filing of said Appeal Brief.

☒ Please charge any additional fees to the account of NCR Corporation, Deposit Account No. 14 0225.

Respectfully submitted,

James M. Stover
Reg. No. 32,759

NCR Corporation
Dayton, Ohio
Tel. No. (937) 445-7663
Fax No. (937) 445-6794

CERTIFICATION OF MAILING UNDER 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on Aug. 2, 2005

By: Sallie Spicer
Name: Sallie Spicer

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Dayton, Ohio

Docket No. 9169

Application of:

FRAZIER, D. et al.

Group Art Unit: 2135

Serial No. 09/703,157

Examiner: CYORFI, THOMAS A.

Filed: October 31, 2000

For: **GATHERING DATA FROM A DATABASE FOR DISPLAY**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

BRIEF ON APPEAL

Sir:

This is an appeal under 37 CFR 1.191 to the Board of Patent Appeals and Interferences of the United States Patent and Trademark Office from the final rejection of claims 1 through 9, 13 through 15, 17 and 18 of the above-identified patent application. The claims were finally rejected in an Office Action dated Januay 31, 2005. Three copies of the brief are filed herewith, together with the requisite fee under 37 CFR 1.17(f).

CERTIFICATION OF MAILING UNDER 37 CFR 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on Aug 2, 2005.

By: Sallie Spicer
Name: Sallie Spicer

(1) REAL PARTY IN INTEREST

The present application is assigned to NCR Corporation.

(2) RELATED APPEALS AND INTERFERENCES

There are currently no known active appeals or interferences related to the present application.

(3) STATUS OF CLAIMS

Claims 1 through 9, 13 through 15, 17 and 18 are pending in the application.

Claims 1 through 9, 13 through 15, 17 and 18 are all rejected and are being appealed. Such claims are shown in the Appendix attached to this Appeal Brief

(4) STATUS OF AMENDMENTS

A response to the Final Rejection has not been filed.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1

Independent claim 1 recites a method of gathering data from a database, comprising:

storing within a database table, objects containing image data, said database table comprising at least one row including objects having multiple data types, each data type being stored within a different column within said database table;

receiving, in a server system, objects extracted from at least one row of said database table in response to a first request received from a client system, the objects corresponding to one or more layers;

in the server system and in response to said first request, combining the objects and creating a first file containing a representation of the image data for communication to the client system;

displaying said representation of the image data in the client system;

generating a second request for at least one additional layer of image data in response to a selection at said client system of an element of the displayed representation of the image data in the client system;

receiving, in said server system, additional objects extracted from at least one additional row of said database table in response to said second request received from said client system, the objects corresponding to said at least one additional layer of image data;

in the server system and in response to said second request, combining the additional objects and creating a second file containing an updated representation of the image data for communication to the client system; and

displaying said updated representation of the image data in the client system.

A database table for storing "objects containing image data, said database table comprising at least one row including objects having multiple data types, each data type being stored within a different column within said database table" is illustrated in Figure 2. In the example described, the objects stored in the table 150 are used to form "resultant" images from a combination of a background image and various points, lines, and polygons that can be drawn over the background image. In table 150, the background image corresponding to each layer is stored in a column 110, the lines corresponding to each layer are stored in a column 112, points corresponding to each layer are stored in the column 114, and polygons corresponding to each layer are stored in column 116. Each row can

correspond to a different layer, with row 100 storing objects corresponding to layer 1, row 102 storing objects corresponding to layer 2, and row 104 storing objects corresponding to layer 3. Each layer can also be stored in multiple rows, if additional entries are needed to store objects in that layer.

The remaining steps recited in claim 1, are illustrated in Figures 3 and 4. Figure 3 shows a message flow diagram of messages exchanged between, and actions performed by, a client system, server system, and database system. In response to a user action (such as selection of an icon or other element in the display 20 or activation of a button), the client system sends (at 202) a first request that contains a query string, such as an SQL string. When the server system receives the first request, the server system sends another request (at 204) containing the query string to the database system. In one example embodiment, the request sent at 202 is an HTTP request, while the request sent at 204 is an Open Database Connectivity (ODBC) request.

In response to the request communicated at 204, the database system extracts (at 206) objects from the table 150. The extracted objects are then sent (at 208) to the server system. In the server system, the extracted objects are combined (at 210) into a resultant image. The server system then creates (at 212) a VRML file 48 to represent the resultant image, with the VRML file 48 sent (at 214) to the client system. In the client system 14, a viewer routine displays (at 216) the image represented by the received VRML file 28.

One aspect of an image represented according to VRML is its interactive nature. The VRML file can define "sensor nodes" that set off events when a user moves to certain areas of the image and/or when the user clicks on certain elements in the image. Referring now to Figure 4, upon receiving (at 220) the user selection to update the displayed image, the client system sends a second request (at 222) containg a querry string to the server system, which then sends (at 224) a

request containing the query string to the database system. In response to the query, the database system extracts additional objects (at 226) associated with the multiple layers from the table 150. The extracted additional objects are sent (at 228) to the server system. In the server system, the additional objects are combined (at 230) into an updated, or composite, image. The composite image is represented by creating another VRML file (at 232). The server system 16 then sends the VRML file (at 234) to the client system, which then displays (at 236) the image specified in the VRML file.

Claim 13

Independent claim 13 recites a system comprising:

a database including a database table, said database table comprising at least one row including objects containing geospatial data, said objects having multiple data types, each data type being stored within a different column within said database table;

an interface to said database system;

an interface to a client system;

a controller adapted to receive a first request from the client system, and in response to said first request: receive objects containing geospatial data extracted from the database system and combine the objects into a first file that provides a visual representation of the image data;

means for displaying said visual representation of the image data in the client system; and

said controller further adapted to receive a second request from the client system generated in response to a selection at said client system of an element of the displayed representation of the image data in the client system, and in response to said second request: receive additional objects containing geospatial

data extracted from the database system and combine the additional objects into a second file that provides an updated visual representation of the image data.

An exemplary database table, as recited in claim 13, is illustrated in Figure 2. In the example described, the objects stored in the table 150 are used to form "resultant" images from a combination of a background image and various points, lines, and polygons that can be drawn over the background image. In table 150, the background image corresponding to each layer is stored in a column 110, the lines corresponding to each layer are stored in a column 112, points corresponding to each layer are stored in the column 114, and polygons corresponding to each layer are stored in column 116. Each row can correspond to a different layer, with row 100 storing objects corresponding to layer 1, row 102 storing objects corresponding to layer 2, and row 104 storing objects corresponding to layer 3. Each layer can also be stored in multiple rows, if additional entries are needed to store objects in that layer.

All of the elements recited in claim 13, are illustrated in Figure 1. Figure 1 illustrates a communications system 10 having a data network 12 that is coupled to a client system 14 and a server system 16. The server system 16 includes a communications service 44 that is able to send requests to the database system 18. Although not shown, the communications service 44 can communicate through some type of a link interface, such as a LAN interface, to the database system 18.

The server system 16 also includes a network interface 40 coupled to the data network 12, and a protocol stack 42 above the network interface 40. The client system 14 also includes a network interface 32 that is coupled to the data network 12. Above the network interface 32 is a protocol stack 34, which is similar to the protocol stack 42 of the server system 16. The client system 14 also

includes a communications service 26 for enabling communications over the data network 12 with the server system 16.

The client system 14 includes a query routine 24 that, in response to user actions, sends requests to the server system 16 for data in the database 56. In response to user actions, the query routine 24 prepares a query string, such as a Structured Query Language (SQL) string, which is defined by ANSI (American National Standards Institute). The query string created by the query routine 24 is placed into a format that can be communicated over the data network 12.

Within server system 16, communication service 44 receive a first request from the client system, and in response to the received request: receives objects containing geospatial data extracted from the database system which are combined by layer manager 46 into a first file that provides a visual representation of the image data. The first file is provided via data network 12 to the client system 14. Within client system 14, viewer routing 30

The first file is transmitted by the server system 16 is received from the server system 16 by the client system 14 as a VRML file 28. The VRML file 28 is accessible by a viewer routine 30, such as a VRML browser, which is able to present information in the VRML file 28 in a screen 22 of a display 20 in the client system 14.

Communication server 44 also receives a second request from the client system generated in response to a selection at said client system of an element of the displayed representation of the image data in the client system, and in response to said second request: receive additional objects containing geospatial data extracted from the database system which are combined by layer manager 44 into a second file that provides an updated visual representation of the image data.

(6) ISSUES

Whether claims 1 through 3, 5 through 8, 13 through 15, and 17 were properly rejected under 35 U.S.C. §103 (a) as being unpatentable over U.S. Patent No. 6,061,689, issued to Chang et al. in view of U.S. Patent No. 5,966,135, issued to Roy et al.

Whether claims 4, 9 and 18 were properly rejected under 35 U.S.C. §103 (a) as being unpatentable over Chang et al. in view of issued to Roy et al., and further in view of U.S. Patent No. 6,348,927, issued to Lipkin et al.

(7) GROUPING OF CLAIMS

Claims 1 through 9, 13 through 15, 17 and 18 stand and fall together.

(8) ARGUMENT

Referring to claim 1, Chang et al. was cited as disclosing a method of gathering data from a database, comprising:

storing within a database table, objects containing image data, said database table comprising at least one row including objects having multiple data types, each data type being stored within a different column within said database table; and

receiving, in a server system, objects extracted from at least one row of said database table in response to a first request received from a client system.

Roy et al was cited as disclosing:

objects corresponding to one or more layers;

in the server system, combining the objects and creating a file containing a representation of the image data for communication to the client system;

displaying said representation of the image data in the client system;

generating a second request for at least one additional layer of image data in response to a selection at said client system of an element of the displayed representation of the image data in the client system;

receiving, in said server system, additional objects extracted from at least one additional row of said database table in response to said second request received from said client system, the objects corresponding to said at least one additional layer of image data;

in the server system, combining the additional objects and creating a file containing an updated representation of the image data for communication to the client system; and

displaying said updated representation of the image data in the client system.

Referring to claim 13, Chang et al was cited as disclosing a system comprising:

a database including a database table, said database table comprising at least one row including objects containing geospatial data, said objects having multiple data types, each data type being stored within a different column within said database table;

an interface to said database system; and

an interface to a client system.

Roy et al was cited as disclosing a controller adapted to receive a first request from the client system, receive objects containing geospatial data extracted from the database system in response to the first request, and combine the objects into a file that provides a visual representation of the image data;

means for displaying said visual representation of the image data in the client system; and

said controller further adapted to receive a second request from the client system generated in response to a selection at said client system of an element of the displayed representation of the image data in the client system, receive additional objects containing geospatial data extracted from the database system in response to the second request, and combine the additional objects into a file that provides an updated visual representation of the image data.

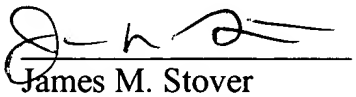
In their current form, independent claims 1 and 13 clearly indicate that: (1) in the server system and in response to a first request from the client, objects are extracted from at least one row of said database table, and the objects are combined to create a first file containing a representation of the image data for communication to the client system; and (2) in the server system and in response to a second request from the client, additional objects are extracted from the database table, and the additional objects are combined to create a second file containing a representation of the image data for communication to the client system.

The present Official Action acknowledges that Chang et al. does not disclose combining objects extracted from a database and combining the objects to create a file containing a representation of the image data for communication to a client system. Although Roy et al. discloses a map author which is used to create, modify and electronically publish map windows files (.mwf files), it is not seen that objects are extracted from the database and combined to create a first file containing a representation of the image data in a server system in response to a first request from the client system, and thereafter additional objects are extracted from the database and combined to create a second file containing a representation of the image data in the server system in response to a second request from the client system.

It is believed that inventions recited in claims 1 and 13 are not taught by the cited references. Accordingly, claims 1 and 13, as well as claims 2 through 9 which depend from claim 1, and claims 14, 15, 17 and 18 which depend from claim 13 are believed to be patentable over the cited references to Chang et al. and Roy et al., taken singularly or in combination.

Review of the present application and claims with consideration of the foregoing comments, and reconsideration of the rejection of claims 1 through 10, 16 through 20 and 24, are respectfully requested.

Respectfully submitted,



James M. Stover
Reg. No. 32,759

NCR Corporation
1700 South Patterson Blvd., WHQ-4W
Dayton, Ohio 45479-0001
Tel. No. (937) 445-7663
Fax No. (937) 445-6794

(9) APPENDIX

1. A method of gathering data from a database, comprising:

storing within a database table, objects containing image data, said database table comprising at least one row including objects having multiple data types, each data type being stored within a different column within said database table;

receiving, in a server system, objects extracted from at least one row of said database table in response to a first request received from a client system, the objects corresponding to one or more layers;

in the server system and in response to said first request, combining the objects and creating a first file containing a representation of the image data for communication to the client system;

displaying said representation of the image data in the client system;

generating a second request for at least one additional layer of image data in response to a selection at said client system of an element of the displayed representation of the image data in the client system;

receiving, in said server system, additional objects extracted from at least one additional row of said database table in response to said second request received from said client system, the objects corresponding to said at least one additional layer of image data;

in the server system and in response to said second request, combining the additional objects and creating a second file containing an updated representation of the image data for communication to the client system; and

displaying said updated representation of the image data in the client system.

2. The method of claim 1, wherein said database comprises an object relational database.

3. The method of claim 1, wherein creating said first and second files comprises creating first and second markup language files, respectively.

4. The method of claim 3, wherein creating said first and second markup language files comprises creating first and second Virtual Reality Markup Language files, respectively.

5. The method of claim 1, wherein said objects contain geospatial data.

6. The method of claim 1, wherein said objects contain geospatial data and said multiple data types include at least one of the following elements: points, lines, and polygons.

7. The method of claim 1, wherein said objects contain geospatial data and said multiple data types include at least one of the following elements: an image, points, lines, and polygons.

8. The method of claim 7, wherein combining the objects comprises combining two or more of the image, points, lines, and polygons.

9. The method of claim 8, wherein creating said first and second files comprises creating first and second Virtual Reality Markup Language files, respectively.

10 through 12. (Canceled)

13. A system comprising:

a database including a database table, said database table comprising at least one row including objects containing geospatial data, said objects having multiple data types, each data type being stored within a different column within said database table;

an interface to said database system;

an interface to a client system;

a controller adapted to receive a first request from the client system, and in response to said first request: receive objects containing geospatial data extracted from the database system and combine the objects into a first file that provides a visual representation of the image data;

means for displaying said visual representation of the image data in the client system; and

said controller further adapted to receive a second request from the client system generated in response to a selection at said client system of an element of the displayed representation of the image data in the client system, and in response to said second request: receive additional objects containing geospatial data extracted from the database system and combine the additional objects into a second file that provides an updated visual representation of the image data.

14. The system of claim 13, wherein the database system comprises an object relational database system.

15. The system of claim 13, wherein said multiple data types include at least one of an image, points, lines, and polygons.

16. (Canceled)

17. The system of claim 13, wherein the first and second files comprise first and second markup language files, respectively.

18. The system of claim 13, wherein the first and second files comprise first and second Virtual Reality Markup Language files, respectively.

19 through 25. (Canceled)